Journal of Tourism, Hospitality and Sports
ISSN (Paper) 2312-5187 ISSN (Online) 2312-5179 An International Peer-reviewed Journal
Vol.38, 2018
www.iiste.org

# Community Based Ecotourism and Its Role in Local Benefit and Community Perceptions of Resource Conservation: A Case Study in Adaba-Dodola Districts, South Ethiopia

Israel Petros Menbere [1*] Kassahun Abie [2] Hadis tadele[3] Getahun Gebru[4]
1.Department of Biology, College of Natural and Computational Sciences, Dilla University, P.O. Box-419, Dilla, Ethiopia
2.Department of Wildlife and Ecotourism Management, Wolkite University, Wolkite, Ethiopia
3.Department of Zoological Sciences, Addis Ababa University, Addis Ababa, Ethiopia
4.Department of Agricultural economics, Maddawalabu University, Bale Robe, Ethiopia

**Abstract**
Ecotourism is a recently emerged concept described as ecologically friendly, economically viable and socially acceptable form of tourism. It has basic principles for conservation of environment, local culture, and ensuring the major beneficiary and participation of local communities. This research paper aimed to determine the practice of community based ecotourism and its role in local benefit and community perceptions of resource conservation in Adaba-Dodola districts, in South Ethiopia. In the study area, some communities are participant while others are nonparticipant of the community based ecotourism program intervention. The participant kebeles also vary depending on area closure, time of establishment and total number of households who are involved in the program. Moreover, the issues related to income generating ecotourism activities, opportunities to promote ecotourism, local attitudes towards the ecotourism program and challenges that impact the community based ecotourism in the area have not been well documented. A total 213 sample households, consisting 107 CBECT program and 106 non-program groups, were randomly selected from 5 program and 5 counterfactual kebeles, respectively. The primary data were collected through questionnaires, interviews, field visits and focused group discussions. Document reviews were also made to support the study. The quantitative data were analyzed through descriptive statistics while the qualitative data were analyzed in the form of narrations. The result of the study indicated that tour guiding, house renting, horse renting, traditional handcraft selling, safari hunting assistant and other activities like vegetable supply and honey provision as the income generating ecotourism activities in the districts. Revenue generation, involvement in cooperatives, employment opportunities and market for local products were the main ways of community benefit from ecotourism in the area. Diversity of ecotourism attractions, enthusiasm of local peoples for ecotourism and economic and infrastructural development were found to be the main opportunities to promote the importance of ecotourism in the site. The perception of participant communities on the importance of community based ecotourism in resource conservation and livelihood improvement showed a higher positive response than nonparticipants of the ecotourism program. The perception of both participant and nonparticipant groups on conservation challenges indicated that farmland expansion, inter resource use conflict and unsustainable resource use as the three main perceived conservation problems by both participants and nonparticipants of the ecotourism intervention. Absence of common governing rule and inadequate implementation of the ecotourism program were also the main causes of resource depletion revealed by participant and nonparticipant groups. Problem of non-ecotourism members and increasing demand for agricultural land were the main identified challenges of the community based ecotourism program in the areas. The participation and collaboration of different ecotourism stakeholders is suggested to promote community based ecotourism program and its role in the area.
**Keywords**: Adaba, benefit, community-based**,** Dodola, conservation, ecotourism, perception.

## Introduction

Community-based ecotourism is a way of conservation and tourism development, which emerged in the 1980s, due to the older conservation activities prohibited the interests of local communities (Brockington, 2002). All people inhabiting conservation areas were removed from the land and displaced onto marginal surrounding lands. According to (Veit and Benson, 2004), about 20 million people were displaced from their land. In 1975, the fights of indigenous peoples for their rights and land made the International Union for Conservation of Nature (IUCN) and the World Parks Congress to recognize their rights of the protected areas (Cholchester, 2004).

Community-based ecotourism initiatives are bottom-up activities that bring different stake holders to work for achieving desired goals of conservation, local livelihood improvement and development of tourist facilities. In contrast to mass tourism, the purpose of community based ecotourism (CBET) projects is to conserve natural resources and to generate additional income for the local people (Ven, 2015). To achieve this, the involvement of local communities in ecotourism is crucial (Forgie *et al*., 2001).

Ecotourism provides various benefits to the disadvantaged, marginalized and rural areas. In so doing, it

plays a pivotal role in poverty alleviation, income generation for local communities and protection of the environment (Colvin, 1996). Ecotourism is also important in stimulating economic development and social wellbeing of people and at the same time preserving the natural environment and cultural heritage through awareness creation (Isaac *et al*., 2012).

Ecotourism has become one of the fastest growing segments of the tourism industry in the world (UNWTO, 2001). It provides better linkages, creates local employments, creates the multiplier effect, promotes conservation of biodiversity and fosters sustainable development (Khan, 1997; Belsky, 1999). However, the roles of community-based ecotourism in Ethiopia are insignificant as compared to the various resources the country has. The contributions to employment opportunities; foreign exchange earnings and improving the welfare of local people in Ethiopia (Gezon, 1997; Mbaiwa, 2003) are inadequate. Moreover, researches on the quintessence of ecotourism as pro-poor tourism approach in promoting rural local development in Ethiopia are scant (Ogato, et al., 2014).

Currently, to promote the importance of ecotourism in conservation and local people's livelihood improvement, community-based ecotourism has been given much attention in Ethiopia. One of the ecotourism initiative in Ethiopia is the Adaba-Dodola community based ecotourism which has been established in 1995 with the help of German Agency of Technical Cooperation (GTZ). Its objective was to improve the local communities' livelihood through ecotourism in which income is generated from tourists. The Adaba-Dodola ecotourism initiative involved different kebeles in which both male and female households take a part in various ecotourism activities that helps to them obtain economic benefits. However, there are local communities that have not yet involved in ecotourism program and even the level of household involvement varies from one kebele to another (Oromia forest and wildlife enterprise, 2013). Moreover, detail studies lack on ecotourism benefits, community perception towards ecotourism and challenges that impact community based ecotourism program in the area. Hence, the overall perspective of this study is to determine the role of community based ecotourism in local benefit and community perceptions of resource conservation in Adaba-Dodola districts, in South Ethiopia.

## Methodology

### Description of the study area

The study was carried out in Adaba and Dodola Woredas (districts). The Woreda is the second lowest administrative unit of the current Ethiopia with several kebeles (composition of villages) on its area. Both districts were selected because they are places where the Adaba-Dodola community based ecotourism project is found. They are in South eastern part of Ethiopia, found in Oromia regional state, West Arsi Zone (Figure 1). The 2007 national census report indicated that the total population of the Adaba district was 138,717, while the total population of the Dodola district was 193,812 (CSA, 2007). The agro climate zone of the study area ranges from dega to wurch which are characteristics of most of the Ethiopian high lands. The rainfall distribution is bimodal having two rainy seasons per year. The mean annual rainfall is 912.5mm and the mean annual temperature is $15.6^0$ c (Teshome, 1999).

### Adaba-Dodola community based ecotourism project

Adaba-Dodola community based ecotourism project was initiated in 1995 to develop a replicable model for the conservation and sustainable use of biodiversity in Ethiopia. The community based ecotourism project was established based on the forest priority area of Adaba-Dodola which is one of priority forest areas of the country. This project was initiated to control the unregulated access to the natural forests since all attempts to regulate access have failed in the past (**Asfaw**, 2004). The Adaba dodola forest priority area is located 345kms far from Addis Ababa with an attitude between 2400-3753m above sea level. It is found on the escarpment that start from Adaba to Bale mountain and extends between $6^0$ 50- $7^0$ 0' north latitude and $39^0$ 07- $39^0$22 east longitude on the southern plateaus (Teshome, 1999).

Adoba dodola forest priority area makes one of the main ecotourism attraction sites of Ethiopia. The site is better described as nature based tourism attractions because of fauna, flora and beautiful land escape scenery. The area offers high ecotourism recreational opportunities for both international and domestic tourists (Adaba woreda culture and tourism offices, 2015). With an objective of alternative source of income, five ecotourism lodges which are managed by local communities established. Trekking routes were established to promote the ecotourism activities in the area. Camping sites, horses, tents, guides and others are also provided by different stakeholders. These services are provided for tourists who are interested in site seeing, mountain trekking, hunting and looking traditional life style of the communities (Asfaw, 2004).

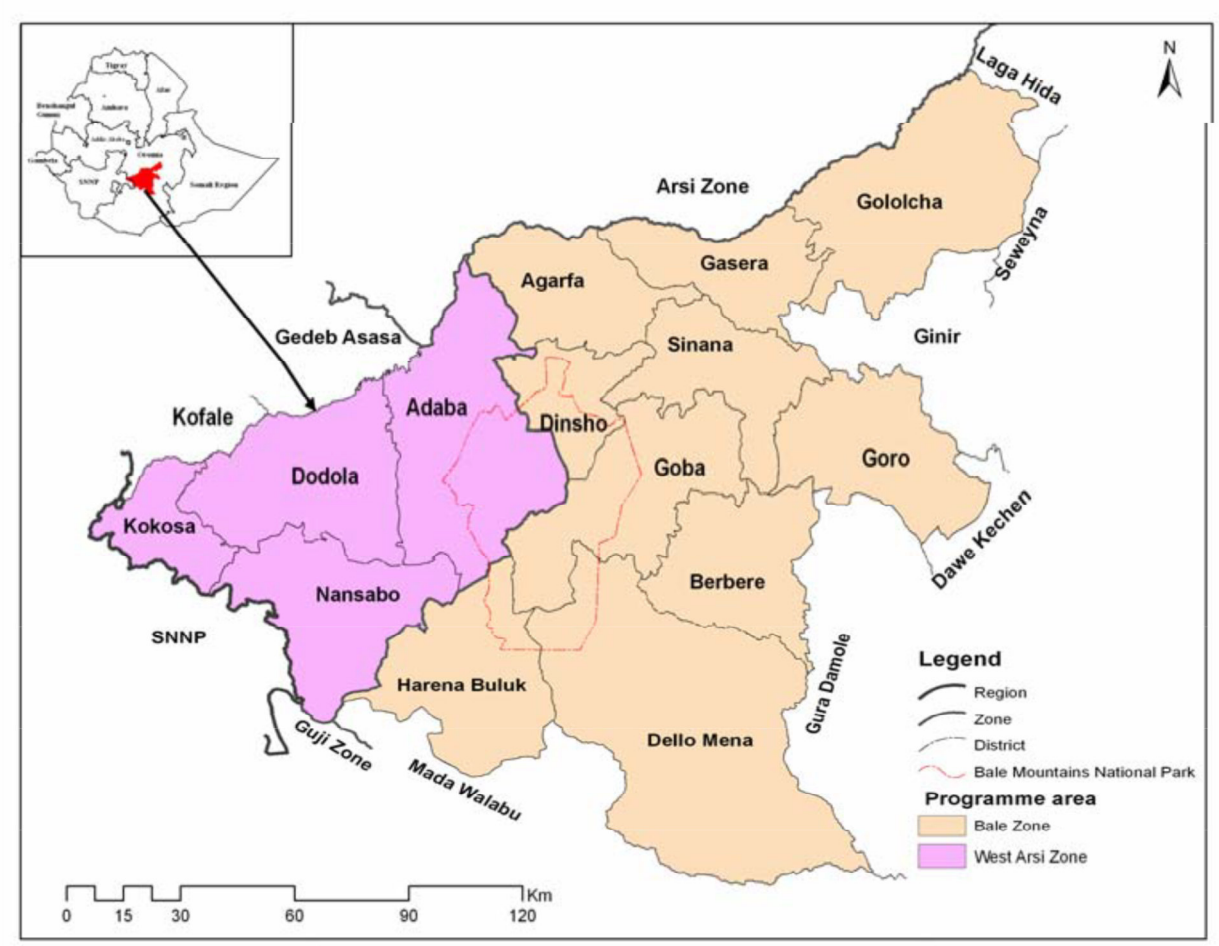


Fig 1. Map of the study area

**Sampling design**

For this specific study, our target groups were the two Adaba and Dodola districts, culture and tourism offices, Oromia forest and wildlife enterprise and local communities. Stratified random sampling technique was employed to select the sample households from the participant and nonparticipant groups. Adaba and Dodola districts comprise 35 kebeles in which 18 are in Adaba while 17 are in Dodola. From these, 6 kebeles are currently involved or they are direct participants in community based ecotourism activities using legal system whereas 29 kebeles are not involved or nonparticipants of the community based ecotourism activities. From the 6 kebeles, 5 in Dodola and 1 in Adaba are currently involved in the ecotourism development activity. From these 6 kebeles (4 from Dodola and 1 from Adaba) from the two districts were selected purposely based on coverage of forest area, time of establishment and total number of households involved to obtain adequate data on community based ecotourism of the area. For comparing the attitude of both participant and nonparticipant groups towards community based ecotourism, 5 kebeles from the 29 kebeles of nonparticipant groups were randomly selected.

However, the total sample size of households was determined based on Cochran (1977) formula. The total number of households found in target sample kebeles both in participant and nonparticipant kebeles were 2308. Of which Bura Adele, Denba, Keta Berenda, Ashena Robe and Bucha are from participant kebeles with 556, 150, 269, 120 and 90 households, respectively. Whereas Barisa, Kechema, Hara Ganata, Ejersa Chumogo and Wesha were the nonparticipant kebeles with 158, 248, 269, 149 and 299 households, respectively (Oromia forest and wildlife enterprise, 2013). The sample size for the participant and nonparticipant kebeles was determined based on the following equation.

$$n = \frac{(\frac{Z\alpha}{2})^2 * P * Q}{(W)^2}$$

Where $\frac{Z\alpha}{2}$= 1.96 at α=at 95% confidence interval

P*q= is estimate of marginal variance in which it is 5%

W= Researchers willingness to accept margin of error in which we take 9%

$$n = \frac{(1.96)^2 * 0.5 * 0.5}{(0.09)^2}$$

$n$ =118 participant and non-participant kebeles

If the value of n is greater than 5% of the population we can apply the Cochran (1977) correction formula which is given by

$$n1 = \frac{no}{1 + (no - 1)/N}$$

no=118

Therefore the sample size for participant groups were

$$n1 = \frac{118}{1+(118-1)/1185} = 107$$

The sample size for the non-participant kebeles was

$$n2 = \frac{118}{1+(118-1)/1123} = 106$$

Sample household heads were selected proportionally both from participant and nonparticipant kebeles. Accordingly, the sample household heads for the participant kebeles, Bura Adele, Deneba, Keta Berenda, Ashena Robe and Bucha were 50, 14, 24, 10 and 9, respectively. While the sample household heads for the nonparticipant kebeles, Berisa, Kechema, Hara Genetaa, Ejersa Chumogo and Weshaa were 15, 24, 25, 14 and 28, respectively.

**Method of data collection**

The data collection activity of this research was conducted starting from November 2014 to June 2015. Data were gathered using site visits, interviews, questionnaire survey and focused group discussion. Secondary data were also obtained from Oromia Forest and Wildlife Enterprise Offices of Adaba-Dodola branch and Culture and Tourism Office of Adaba and Dodola districts. Field observation and interview were made to gather adequate and relevant data about the ecotourism activities and opportunities to promote ecotourism in the area. Interview both with participants and nonparticipants of the program was made to identify the challenges that impact community based ecotourism in the area. Interview was also made with key informants to assess the income generating ecotourism activities and to reveal the overall challenges associated with community based ecotourism in the districts. Accordingly, we interviewed the manager of Dodola district forest and wildlife enterprise, chairman of tour guide association and general manager of farmers union and other stakeholders at each sample districts.

Questionnaire distribution was made to collect data on income generating ecotourism activities; ways of community benefit, opportunities to promote the importance of ecotourism program in the area, to assess the attitude of both participant and nonparticipant communities towards community based ecotourism and to distinguish the challenges of community based ecotourism in the districts. To achieve this, semi-structured questionnaire was prepared and administered for selected sample households from participant and nonparticipant groups in both Adaba and Dodola districts. During the questionnaire survey, provision of extra questionnaires was undertaken to fill the gap of nonresponses the by sample households.

Finally, the data collection process was supported with focus group discussion from both participant and nonparticipant groups and secondary sources from relevant offices. Two focus group discussions (FGDs) were conducted on each target groups (Four FGDs for the whole study). In each FGD, one community leader, four elders of villages, one officer from the community based ecotourism program, one expert from wildlife and forest enterprise of the districts, one from culture and tourism office of each district, government administrators and one from female association were selected and discussed on ecotourism activities undertaken by communities, challenges and related historical perspectives of community based ecotourism in both districts. In addition, documents (on members of the community based ecotourism program and ecotourism resources of the districts) from Oromia forest and wildlife enterprise offices of Adaba-Dodola branch and culture and tourism office of Adaba and Dodola districts were included to substantiate the study.

**Data analysis**

Descriptive statistical methods such as percentages were used to analyze the income generating ecotourism activities, ways of community benefit from ecotourism in the area, opportunities to promote the ecotourism importance in the sites and challenges that impact community based ecotourism in the area. Chi-square test of SPSS 20.0 version software were used to describe the socio-demographic characteristics and compare the attitudes of communities towards conservation problems while two independent t-tests were used compare the attitudes of communities towards ecotourism importance in the areas. Statistical tests used were two-tailed with

95% confidence intervals. Moreover, the data obtained on ecotourism opportunities, the responses of nonparticipants on challenges of community based ecotourism and the data obtained from key informants and focus group discussion with members of participant and nonparticipant groups were analyzed in the form of narration.

**Result and discussion**

**Description of the socio-demographic characteristics of sample households**

From the 107 respondents who were selected from participant communities in Adaba and Dodola districts, about 81 (75.70%) were males whereas 26 (24.30%) were females. The number of males was significantly higher than females ($X^2$ =28.271, df=1, p=0.00). This indicates females were not actively involved in the community based ecotourism activities in the areas. The age structure of the respondents was characterized by 8 (7.48%) in the age category between 18 and 32, 35 (32.71%) between 33 and 44 and the remaining 64 (59.81%) were 45 and above years. Significant difference was observed in the age category of respondents ($X^2$ = 43.981, df = 2, p = 0.000). Significant variation was also observed in the educational level and in the occupation type of the participant respondents. Of the selected 106 respondents from nonparticipant groups, 84 (79.25%) were males while 22 (20.75%) were females. There was significant difference between males and females ($X^2$ = 36.264, df = 1, p = 0.00). Significant variation was also observed in the age category and occupation of the respondents while no significant variation was observed in the educational level of nonparticipant groups (Table 1).

Table 1: Demographic characteristics of the sample households

Participants

| Variables | Categories | N | % | $X^2$ | df | P value |
|---|---|---|---|---|---|---|
| Sex | Male | 81 | 75.70 | 28.271 | 1 | 0.00 |
| | Female | 26 | 24.30 | | | |
| Age | 18-32 | 8 | 7.48 | 43.981 | 2 | 0.00 |
| | 33-44 | 35 | 32.71 | | | |
| | >=45 | 64 | 59.81 | | | |
| Education | Literate | 13 | 12.15 | 61.318 | 1 | 0.00 |
| | Illiterate | 94 | 87.85 | | | |
| Occupation | Employee | 1 | 0.93 | 185.000 | 3 | 0.00 |
| | Merchants | 4 | 3.74 | | | |
| | Farmer | 87 | 81.31 | | | |
| | Others | 15 | 14.02 | | | |

Nonparticipants

| Variables | Categories | N | % | $X^2$ | df | P value |
|---|---|---|---|---|---|---|
| Sex | Male | 84 | 79.25 | 36.264 | 1 | 0.00 |
| | Female | 22 | 20.75 | | | |
| Age | 18-32 | 21 | 19.81 | 8.849 | 2 | 0.012 |
| | 32-44 | 41 | 38.68 | | | |
| | >=45 | 44 | 41.51 | | | |
| Education | Literate | 56 | 52.83 | 0.340 | 1 | 0.560 |
| | Illiterate | 50 | 47.17 | | | |
| Occupation | Employee | 1 | 0.94 | 192.642 | 3 | 0.00 |
| | Merchants | 12 | 11.32 | | | |
| | Farmer | 88 | 83.02 | | | |
| | Others | 5 | 4.72 | | | |

N: Number of respondents, %: Percentage

**Income generating community based ecotourism activities of the study area**

The income generating community based ecotourism activities in the area include tour guiding, house renting, horse renting, traditional handcraft selling, safari hunting assistant and other services. House renting is the main activity that affords a greater income for participants. Horse renting is the second most important activity in terms of revenue obtained from ecotourism. Traditional handcraft selling, safari hunting assistant and tour guiding are the less frequently practiced ecotourism activities by participant communities accounting less than ten percent. Other services such as hut keeping, honey provision and vegetable supply are also the mechanisms by which communities can collect income from ecotourism activities. Ecotourism activities that generate income for local communities are described in (Fig 2).

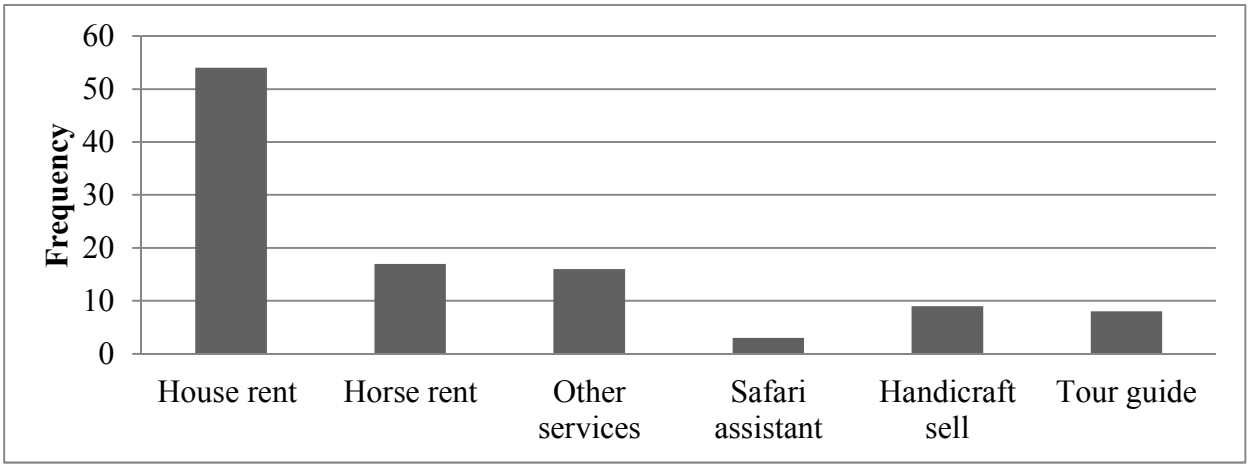


Fig 2. Ecotourism activities that generate income for local communities in the study area

In the study area, community based ecotourism provides alternative job opportunities for local communities to improve their life. This coincides with the study in Kenya in which community based ecotourism provides an opportunity for an alternative source of livelihood to communities (Ogara etal., 2013). In this aspect, we observed that youngsters around the district participating in various ecotourism activities. Farmers and Dodola tour guide association members have been providing horse rental services and selling various homemade local traditional materials for mountain trekking tourists. It seems that horse ownership is more vital for residents of Deneba, Ashena and Bura Adele kebeles. The average daily price of one horse with its riding material is 160 ETB (6.15$). However, if the horse renter travels with the tourist in order to return back his horse his daily revenue will be doubled excluding his other service revenue of handcraft sell, tour guiding and language translations. Other services such as hut keeping, honey provision and vegetable supply are being practiced to obtain revenue from ecotourism in the area. This was observed in our one full week journey to the densely forest and natural gifts, in Ashena Robe, South of Dodola Woreda and adjacent to Nensebo districts of West Arsi Zone. Local people's involvement in the provision of agricultural products to visitors is vital to relate ecotourism with the existing livelihood activities and supports those communities who depend on agriculture through ecotourism (Dejene et al., 2014). Although Adaba-Dodola community based ecotourism site comprises a great potential for ecotourism activities, the type of income generating community based activities are limited. Absence of adequate infrastructure and tourist facilities were observed as factors preventing the diversification of ecotourism activities in the area. The availability of adequate facilities and services is critical to attract more visitors to the destinations and maximize the length of stay for better income (Taressa, 2015a).

Similarly, as the participant of four FGDs responses, almost all groups strongly reached in consensus in terms of the positive impact of community based ecotourism approach on their livelihood and sustainable natural resource use and conservation. The interview with key informants consolidates this point. Genene, 41 and manager of Adaba-Dodola district forest and wildlife enterprise told us about the current coverage of the protected areas by participatory areas and respective blocks. Therefore, the report of his collogues were one of the pertinent bases for our overall survey design and administration. Moreover, Kemal, the chairman of the enterprise based farmers union described the administrative and economic aspects of the cooperatives and members. He said that though still its establishment's farmers could not entertain their dividends, they accumulated sufficient surplus and patronage refund in the common account of the union. This was collected through tourist hunting services, fees of tour guide services and horse rental activities of members. Finally, the chairman elaborated the cash receipt and deposit procedure of wild life hunting services of tourists. Before traveling and hunting, he/she has to deposit and bring bank receipts at predetermined type, price and age of the animal he/she want to hunt.

**Ways of community benefits from community based ecotourism in the districts**

The ways of community benefits in the area include revenue generation, employment, asset building, market for local products, involvement in cooperatives and capacity building. Revenue generation 30 (28.04%) and involvement in cooperatives 23 (21.50%) were the main ways of community benefit in the area. Employment 18 (16.82%) was the third way of community benefit while market for local products 16 (14.95%) was the fourth way of community benefit in the area (Table 2).

Table 2. Ways of community benefit from ecotourism in the area

| Techniques | Frequency | Percentage |
|---|---|---|
| Revenue generation | 30 | 28.04 |
| Employment | 18 | 16.82 |
| Asset building | 12 | 11.21 |
| Market for local products | 16 | 14.95 |
| Involvement in cooperatives | 23 | 21.50 |
| Capacity building | 8 | 7.48 |

Community based ecotourism in the area contributes for community benefit in various ways. One of these is revenue generation. Financial support to residents and funding is an important component of community based ecotourism projects (Thomas, 2014). When effectively undertaken, community based ecotourism maximizes the benefits and revenue generation by providing additional income to the local businesses (Wearing and Neil, 1999; Gupta and Rout, 2016). In the study area, the communities benefit from the participation in cooperatives, employment opportunities, increasing market for local goods and benefit through asset building. Community based ecotourism supports the local peoples through involvement in multiple enterprises, enhancing local employment, increased market for local products, asset building and overall community development by adding values to the local nature and culture (Wearing and Neil, 1999; Gupta and Rout, 2016; Ijeomah, 2012). Ecotourism also benefits local communities and contributes for the development of local economies by shifting livelihood options from agriculture to tourism sector and release pre-existing pressure on natural resources and brings a notable change in employment structure (Li, 2006).

The other aspect of community benefit from ecotourism in the area is capacity building. Capacity building was identified as one of the modes through which residents were empowered to participate in community based ecotourism program. This process helps local people to develop skills necessary to manage their resources in a sustainable manner (Gubbles and Koss, 2000). Stakeholders will only be able to work in cohesion when there is a greater awareness among community about the benefits of community based ecotourism. Hence, capacity building through training and education are important aspects in community based ecotourism (Gupta and Rout, 2016).

**Opportunities to promote the livelihood importance of ecotourism in the districts**

Various opportunities that promote the livelihood importance of ecotourism were identified in the districts. Diversity of attractions 30 (28.04%) is the main opportunity to promote the livelihood importance of ecotourism in the areas. Adaba and Dodola districts possess immense potential resources for ecotourism activities. The major ecotourism attractions are wildlife species including endemic mammals and different bird species, the natural forest, spectacular landscape associated with the unique biological feature and intact culture of communities (Fig 2). Enthusiasm of local peoples for ecotourism 23 (21.50%) and economic growth and infrastructural development 15 (14.02%) are the next great opportunities to promote the ecotourism importance of the areas. Proximity to other ecotourism destinations like the Bale Mountains 14 (13.08%), increasing number of educated human labor 13 (12.15%) and presence of ecotourism support policies 12 (11.21%) are also the opportunities crucial to enhance the ecotourism role in the benefit of communities in the districts.

The findings of this study revealed the presence different potentials as the main opportunity for developing ecotourism in the areas. According to (Kubsa et al., 2003), Adaba-Dodola forest is characterized by beautiful scenery and rich biodiversity. The area offers high tourism potential attracting more than 500 international and domestic tourists per annum. The area is home to various wildlife species including the endemic ones. Among the mammals are *Tragelaphus-Buxtoni*, *Tragelaphus*-scripus, *Canis simensis*, *Cebus-polykomos, Chlorocebus-pygerythus, Sywaicapra-Grimacia, Phacochoerus-Africanus, Papio-Anubis*, *Crocuta-Crocuta*. The areas also comprise different bird species which have a significant role for avian tourism. Among the bird species, white checked turako, augur buzzard, black kite (Milvuss migrants), harrier haluk, Abyssinian ground hornbill, secked pigeon, lesser cucki and red necked francine are most common bird species found in the area. The flora in Adaba dodola community based ecotourism site is mainly characterized by afro-montane forest with a unique source of species diversity. The vegetation of the area includes Habesha tid *(Junipers procera falcatus)* wanza, weira and others. In addition to the biological and physical attractions, resources for cultural ecotourism are also found in the districts. These resources are crucial for ecotourism activities such as photographing, sightseeing, trekking, wildlife viewing, sport hunting, camping, horse riding and appreciating culture.

Fig 2. Ecotourism opportunities in Adaba-Dodola community based ecotourism site, in Ethiopia (Wilder, 2016).

Local peoples' enthusiasm for ecotourism, economic and infrastructural development, proximity to other ecotourism destinations, increasing number of educated human labor and presence of ecotourism support policies were also the opportunities to promote the ecotourism benefit in the districts. The presence of these opportunities in both districts is important in that they enable to promote resource conservation, improve tourism facilities, and contribute to enhance the ecotourism benefit in the livelihood of local communities (Menbere and Menbere, 2017). Similarly, the existence of these opportunities favors the importance of community based ecotourism on local livelihood (Ogato et al., 2014; Kidane-Mariam, 2015; Taressa, 2015a). The enthusiasm and participation of communities in ecotourism is vital to improve their living conditions and at the same time enhance conservation through ecotourism (Honey, 2002).

**Local attitudes towards the environmental, societal and economic values of community based ecotourism**

Based on the result obtained from respondents in the area, the perception of communities towards community based ecotourism was characterized by a positive response of ecotourism importance in societal development of the community both by participants and nonparticipants. The importance of community based ecotourism in resource conservation and livelihood improvement is higher in participants. The two independent samples t-tests showed that there were significant differences in positive response between participants and nonparticipants towards ecotourism importance for resource conservation, ($t= -2.803$, $df=8$, $p=0.023$). Similarly, the perception towards ecotourism importance for livelihood improvement has also showed significant variation between participants and nonparticipants, ($t= -3.471$, $df=8$, $p=0.008$) in their positive response. However, there were no significant differences in positive response between participants and nonparticipants towards community based ecotourism importance in enhancing societal development ($t= -1.415$, $df=8$, $p=0.195$). The perception of communities towards community based ecotourism importance is given in (Table 3).

Table 3. The perception of communities towards community based ecotourism importance

| Perception | Non-Participant | | | Participant | | |
|---|---|---|---|---|---|---|
| | Yes (%) | No (%) | NK (%) | Yes (%) | No (%) | NK (%) |
| CBECT promotes conservation | 31.13 | 54.72 | 14.15 | 89.72 | 8.41 | 1.87 |
| CBECT enhances societal development | 53.77 | 7.55 | 38.68 | 75.70 | 4.67 | 19.63 |
| CBECT contributes for local livelihood improvement | 22.64 | 55.66 | 21.70 | 82.24 | 8.41 | 9.35 |

CBECT: Community based ecotourism, %: Percentage, NK: Not Known

The result from FGD discussants also reveals similar points. The participant FGD groups, almost all strongly reached in consensus in terms of the positive contribution of community based ecotourism approach on their livelihood and sustainable natural resource use and conservation. Furthermore, some participants from nonparticipant FGD groups appreciated their current best knowhow of tourism services and its positive benefits obtained compared to the concept before the GTZ intervention.

The attitude of communities towards community based ecotourism importance for conservation indicates the greater positive response of participants compared to the nonparticipant groups. This might be associated with the membership in community based ecotourism program and want to utilize the resources in proper manner that made a more positive response to be revealed by them. However, the attitude of nonparticipants towards community based ecotourism importance for conservation is low. The positive response by participants is similar to the study by (Thomas, 2013), in which community based ecotourism resulted in better attitude towards resource conservation prohibiting individuals from illegal extraction of resources. FGD members from participant groups also revealed ecotourism benefits in supporting the local community livelihood and promoting sustainable resource conservation. Community-based ecotourism, is tourism that focuses on areas with natural and cultural attractions (rather than, say, urban areas), and which contributes to environmental conservation and local livelihood enhancement (Odede et al., 2015).

Although both participant and nonparticipants believe that community based ecotourism is vital in enhancing societal development, the response was higher in participants. This is due to the practical benefit obtained by the members and the associated training and awareness creation activities. Concerning the knowledge on the importance of community based ecotourism for livelihood improvement; participants had more positive response compared to nonparticipants. This could also be due to the greater exposure of participants for practical community based ecotourism activities, training and experience sharing and the different ways that made communities to benefit from the program. The presence of negative attitude towards community based ecotourism mainly by nonparticipants may be the interest by communities to have free access of natural resource. The local communities perceive the loss of access to these lands as a limitation of their source of livelihood which is dependent on natural resources and agricultural development within these protected areas (Digun-Aweto, et al., 2015). Residents who depend on natural resources are likely to hold negative attitude toward ecotourism development unless they are adequately benefited from ecotourism (Ven, 2015). The exclusion of some kebeles and blocks at the beginning of the program that are claimed by FGD participants in nonparticipant kebels show the presence of conflicts that are occurring as a participant or beneficiary of Adaba Dodola CBECT intervention. This can reduce the success of the program. When income distributions from community based ecotourism become unequal, it creates disparities that make the residents to have negative perceptions about ecotourism and low support for CBET. Therefore, for CBET destinations to exist in sustainable manner, it is necessary to study residents' attitude and promoting their benefit (Men, 2006). Ecotourism can create a marginalized community (minority) whose benefits are not ensured and leads to negative social interaction between beneficiaries and non-beneficiaries. The presence of variation in the infrastructure development in communities between the ecotourism program participant and nonparticipant groups due to the benefits and developments of the ecotourism activity affects the success of ecotourism programs (Teressa, 2015b).

**Conservation problems perceived by communities in the districts**

The perception of both participant and nonparticipant groups on conservation challenges indicated different problems that affect the conservation activities in the areas. Farmland expansion was found to be the main conservation problem illustrated both by participant and nonparticipant groups. Inter resource use conflict was the second conservation problem judged by participants while unsustainable utilization of resources was the second main conservation problem described by nonparticipants. Unsustainable resource use and inter resource use conflict were also described as one of the main three perceived conservation problems by participants and nonparticipants, respectively. However, only inter resource use conflict showed significant difference between participant and nonparticipant groups ($X^2 = 4.667$, df=1, p= 0.031) (Table 4).

Table 4. Community perception towards conservation problems in Adaba-Dodola districts

| Perception | NP | | P | | $X^2$ | df | P value |
|---|---|---|---|---|---|---|---|
| | N | % | N | % | | | |
| Unsustainable resource use | 21 | 19.81 | 15 | 14.02 | 1.000 | 1 | 0.317 |
| Farmland expansion | 30 | 28.30 | 35 | 32.71 | 0.385 | 1 | 0.535 |
| Deforestation | 13 | 12.26 | 5 | 4.67 | 3.556 | 1 | 0.059 |
| Destruction to wildlife and habitats | 11 | 10.38 | 9 | 8.41 | 0.200 | 1 | 0.655 |
| Inter resource use conflicts | 14 | 13.21 | 28 | 26.17 | 4.667 | 1 | 0.031 |
| Overgrazing | 9 | 8.49 | 10 | 9.35 | 0.053 | 1 | 0.819 |
| Others (i.e. poaching, illegal settlement) | 8 | 7.55 | 5 | 4.67 | 0.692 | 1 | 0.405 |

NP: Nonparticipants, P: Participants, N: Number of respondents, %: Percentage

Farmland expansion was the main conservation problem perceived by both groups in the area. The expansion of farmland may be associated with population increase which leads to increased demand for resources. Expansions of cultivation are among the main causes of resource depletions that affect resources in community conservation areas (Thomas, 2013). Inter resource use conflicts were mentioned as problem by participants due to the illegal involvement of non-ecotourism members in the site to meet their various needs. In contrast, nonparticipants complain as participants utilize resources of the conservation site in unsustainable manner. In fact, participants have their own agreement on how and when to utilize resource from the community conservation area (Kubsa et al., 2003), that causes conflict to occur between the two groups. The other conservation problems perceived by participants and nonparticipants were deforestation, overgrazing, destruction to wildlife and others. The FGD discussants of nonparticipant kebels specifically, elder participants from Berisa kebele of Dodola woreda described the presence of threats to biodiversity and wildlife in the area. Intensive grazing and deforestation leads to destruction of wild life and their habitat and affect the various benefits obtained from community conservation areas (Getahun and Yeshanew, 2016). Other conservation problems like poaching and illegal settlement were perceived to occurrence at low rate in the areas.

**Causes of resource depletion perceived by communities in the area**

The community perceptions for the causes of resource depletion in Adaba-Dodola community based ecotourism site are given in (Table 5). Absence of common governing rule and inadequate implementation of the ecotourism program are the main causes revealed by participant and nonparticipant groups. Inadequate resource management and absence of ample patrolling are also factors causing resource depletion according to both participants and nonparticipants. Although the response related to inadequate trust between participant and nonparticipant by both groups is low, there may be a possibility for its growing if the need of communities is not adequately maintained. And, this event can lead to further destruction of the resources in the area.

Table 5. Community perception on the causes of resource depletion in the ecotourism site

| Causes of depletion | NP | | | | P | | | |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | Yes | | No | |
| | N | % | N | % | N | % | N | % |
| Lack of common governing rule | 87 | 82.08 | 19 | 17.92 | 95 | 88.78 | 12 | 11.21 |
| Inadequate implementation of CBE | 64 | 60.38 | 42 | 39.62 | 86 | 80.37 | 21 | 19.63 |
| Inadequate resource management | 61 | 57.55 | 45 | 42.45 | 79 | 73.83 | 28 | 26.17 |
| Absence of adequate patrolling in the areas | 54 | 50.94 | 52 | 49.06 | 62 | 57.94 | 45 | 42.06 |
| Absence of adequate trust among resource users | 32 | 30.19 | 74 | 69.81 | 50 | 46. 73 | 57 | 53.27 |

NP: Nonparticipant, P: Participant, N: Number of respondents, %: Percentage

The study of communities' perception indicated in the area lack of common governing rule, inadequate implementation of CBE, inadequate resource management and absence of adequate patrolling were the causes for resource depletion both by participant and nonparticipant communities. Absence of careful planning, governing rule and management strategy that balances the ecological, social and economic needs of communities can act as a cause for environmental damage (Eshetu, 2014). Participants are involved in community based ecotourism as member, but nonparticipants are not involved as a result not the beneficiary from the dividend obtained as well as other benefit sharing advantages. Unless this benefit sharing scheme is adequately implemented meeting the need of the communities, it leads to negative attitudes in non-beneficiaries due to lack of access to non-timber forest products and few or no economic benefits (Digun-Aweto, et al., 2015). Community-based ecotourism has some issues of concern such as the problem of benefit flow to local people at ecotourism sites (Bhoj and Jan, 2007) and that affect their conservation outlook.

Ecotourism can contribute to economic development and the conservation of protected areas by generating revenues that can be used to sustainably manage protected areas, and by providing local employment and a sense of community ownership. To be successful, ecotourism should promote conservation of natural resources and also provide financial gains for the host country and the local people. However, the insufficient resource management due inadequate participation of the communities appeared to be a cause for resource depletion in the districts and this does not guarantee the sustainable conservation of resources in the area. Absence of adequate patrolling in the areas might also be due to the presence of non-participants. Participants observe the regulation of conserving the resources in the area otherwise they will get penalty. However, for those who are nonparticipants, no more benefit remains if they don't abide the regulation. Hence, the presence of beneficiary and non-beneficiary group in ecotourism destinations can affect the community based ecotourism project as well as sustainable existence of the resources in the site (Teressa, 2015b).

**Challenges that impact community based ecotourism development in the area**

The study on challenges of community based ecotourism in Adaba-Dodola site indicated that problem of non-ecotourism members was the main challenge of the program. Demand for agricultural land was the second highest challenge for the implementation of ecotourism in the site. Lack of adequate promotion was also the other great challenge that hampers the development of community based ecotourism and its benefits for communities followed by lack of adequate infrastructure and tourist facility. The remaining challenges such as lack of adequate awareness, late or unfair distribution of dividend and less measurement from government are less occurring challenges that affect the community based ecotourism activity in the area. The challenges of community based ecotourism in Adaba-Dodola community based ecotourism destination are given in (Table 6).

Table 6. The challenge of community based ecotourism in the area

| Challenges that affect CBE | Respondents | Percent |
|---|---|---|
| Problem with non-ecotourism members | 46 | 42.99 |
| Lack of adequate promotion of CBE | 15 | 14.02 |
| Demand for agricultural land due to population increase | 25 | 23.36 |
| Lack of adequate infrastructure and tourist facility | 8 | 7.48 |
| Lack of adequate awareness about the program | 4 | 3.74 |
| Late or unfair distribution of the dividend | 7 | 6.54 |
| Lack of strong measure from government to stop human interference | 2 | 1.87 |

Among the revealed contending factors in Adaba-Dodola community based ecotourism site, problem of non-ecotourism members was found to be the main challenge of the ecotourism project. The cause for the problem associated with non-ecotourism members may be their inability to join the program and share the benefits. When local communities are excluded from protected area management and their needs and aspirations are ignored, it becomes extremely difficult to enforce conservation policies (Aswani and Weiant, 2004). This was supported by FGD discussants of nonparticipant kebels Dodola district that strongly claimed exclusion of some kebeles and blocks at the beginning of the program which made group conflicts to occur as a participant or beneficiary of CBECT intervention. The result from FGD discussion with discussants in Adaba woreda, in Bucha and Ejersa village also revealed the gaps in enforcing and implementation of the program in the selected blocks of district as planned by GTZ. Though, initially more than seven kebeles were being selected as intervention areas, currently only Bucha is the beneficiary, in a very dispersed and fragmented ways. Accordingly, the discussants recommended and supported the organized and fruitful implementation of such interventions with full commitments of all stakeholders.

The demand for agricultural land was also described as the second main challenge of community based ecotourism in the area. The demand for agriculture is increasing due to population increase and interest to enhance the livelihood. With an increase in human population, demand for farm land increases. The rapid population growth exacerbates deforestation and destruction of wild life habitat through farmland expansion and this in turn affects the survival of the varieties wild animals (Getahun and Yeshanew, 2016). Land use conflicts are also challenges associated with community based conservation areas (Kaswamila, 2012). This was also supported with FGD discussants in Dodola district that described agricultural expansion as among the main challenge to ecotourism development in the area. However, currently, the communities started to look at the wild animals and forests as their own children which lay a strong base for future conservation efforts.

The promotional activity and infrastructure and facility development of the area requires the collaboration of various stakeholders in promoting and enhancing the infrastructure of the site. Despite the occurrence are low, lack of adequate awareness and distribution of benefits are among the challenges in community based ecotourism of the area. FGD discussants of nonparticipant groups in Dodola district described the presence of awareness problem about ecotourism importance in the areas. Moreover, problems associated with sharing dividends were described by Kemal, the chairman of the enterprise based farmers union. He said that farmers

face some challenges in enjoying their dividends in appropriate and timely manner. In community based conservation, the community may complain if benefits are too small and when they lack information about ecotourism and overall aspect of the program (King, 2006). Lack of strong measure from governmental institutions might be due to the existence of nonparticipants in ecotourism and difficulty to ensure their beneficiary. One of the main challenges of development projects at community level is inability to improve the life of all local communities after the project was developed and that doesn't meet the intended objectives (Irmgard, 2014).

**Conclusion**

Community based ecotourism is a way of tourism development with the purpose to conserve natural resources and to generate income for the local people. Adaba-Dodola community based ecotourism is one of such initiatives established to improve the local communities' livelihood through ecotourism and promoting the sustainable conservation of biodiversity. The present study indicated that house renting and horse renting were the main income generating ecotourism activities in the districts. Revenue generation, involvement in cooperatives and employment opportunities were also the main ways of community benefit in the area. Diversity of ecotourism attractions and enthusiasm of local peoples for ecotourism were the main opportunities to promote the importance of ecotourism in the site. The perception of participant communities on the importance of community based ecotourism in resource conservation and livelihood improvement showed higher positive response than nonparticipants of the ecotourism program. Problem of non-ecotourism members and increasing demand for agricultural land were the main identified challenges of the community based ecotourism program in the areas.

**Recommendation**

The participation and collaboration of different ecotourism stakeholders is suggested to promote community based ecotourism program and to reduce the problems caused by non-participants. Awareness creation, fulfilling tourist facilities and services, undertaking coordinated work to promote the natural and cultural ecotourism resources and timely distribution of the dividend and other benefits for communities are recommended for the sustainable development of community based ecotourism as well as its various benefits in the areas. Moreover, further effort should be made to link ecotourism with existing livelihood options like provision of poultry, milk products and coffee services for tourist as they support the local livelihood in a good manner.

**Acknowledgements**

We forward our gratitude to Madda Walabu University for providing fund to conduct the study. We are grateful to OFWE of Dodola branch for granting permission to conduct the research. We are extremely grateful to workers of OFWE and the local people for their hospitality and willingness to share their information. We also would like to acknowledge Genene, Kemal and other workers of OFWE in Dodola district for their unreserved contribution during the study period.

**References**

Adaba and Dodola Woreda Culture and Tourism Offices, (2015). Annual report.

Asfaw, S. (2004). Adaba-Dodola Community-based Eco-tourism Development. A report paper. P. 1-14, Austria/Ethiopia.

Aswani, S. and Weiant, P. (2004). Scientific evaluation in women's participatory management: monitoring marine invertebrate refugia in the Solomon Islands. Hum. Organiz. 63**:**301–319.

Belsky, J. (1999). Misrepresenting communities: The politics of community-basedrural ecotourism in gales point manatee, Belize. Rur. Socio. 64**:** 641-666.

Bhoj, R.K., and Jan, T.B. (2007). Policy brief-Community-based ecotourism for sustainable development in the Mekong Region.

Brockington, D. (2002). Fortress Conservation: The Preservation of the Mkomazi Game Reserve, Tanzania. International African Institute, Oxford.

Cholchester, M. (2004). Conservation Policy and Indigenous Peoples. Environ. Sci. Polic. **7**:145-153.

Cocheran W.G. (1977). Sampling technique , 3rd ed. Jhons and Sons, NewYork.

Colvin, J. (1996). Indigenous Ecotourism: The Capirona Programme in Napo Province, Equador. Unasylva 187(47):32–37.

CSA, 2007. Central Statistics Agency of Ethiopian, Population Census.

Dejene SW, Seyoum H and Ready RU, (2014). Ecotourism potential and its role for sustainable development and livelihood in Awash National Park, Ethiopia. Int J Sci Res, 3: 792-796.

Digun-Aweto, O., Fawole, P. O., and Ayodele, i. A. (2015). Attitude of local Dwellers towards ecotourism in the Okomu National Park, edo state Nigeria. Czech J. Tour. 4(2), 103-115.

Eshetu, A. A. (2014). Ecotourism as a viable strategy for livelihood diversification and sustainable natural resource management in Ethiopia (from eco-development paradigm point of view). J. Envir. Sci. Wat. Ress. 3(2): 040 – 052.

Forgie, V., Horsley, P. and Johnston, J. (2001). Facilitating community-based conservation initiatives. Scie. for Conser. 169: 6-76.

Getahun, BT and Yeshanew, YA (2016). Sustainable ecotourism potentials and its challenges in Ethiopia: The Awash National Park in Focus. I J Hum. Soci. Sci. Res 2(4): 41-49.

Gezon, L. (1997). Institutional structure and the effectiveness of integrated conservation and development projects: case study from Madagascar, Hum. Organiz. 56: 462–470.

Gubbles P and Koss C. (2000). From the Root Up: Strengthening Organisational Capacity through Guided Self-Assessment. World Neighbours, Oklahoma, USA.

Gupta S.K. and Rout, R. C. (2016). The value chain approach in community based ecotourism: a conceptual framework on sustainable mountain development in the Jaunsar-Bawar region of Uttarakhand. Amit. Res. J. Tour. Aviat. Hospi. 01(01):27-38.

Honey, M (2002). Ecotourism and Certification: Setting Standards in Practice. Island Press, Washington DC.

Ijeomah, H. M. (2012). Impact of tourism on livelihood of communities adjoining ecodestinations in plateau state, Nigeria: Special issue: Sustainability, Tourism & Environment in the shift of a Millennium: A Peripheral View, Cultur, 06 (3): 56-71.

Irmgard, B (2014). The myth of empowering the poor through tourism – Time to fess up? Glob. Heal. Perspe. DOI: 10.5645/ghp2014.02.002

Isaac, M. and Conrad-J., J.Wuleka. (2012). Community-Based Ecotourism and Livelihood Enhancement in Sirigu, Ghana. I J Hum. Soci.Scien 2:97-108.

Kaswamila, A.L. (2012). An Analysis of the Contribution of Community Wildlife Management Areas on Livelihood in Tanzania. In: Sustainable Natural Resources Management. (Kaswamila, A.L., Ed.). pp, 953-978. The University of Dodoma, Dodoma.

Khan, M. M. (1997). Tourism development and dependency theory: mass tourism vs ecotourism.

Kidane-Mariam, T. (2015). Ethiopia: Opportunities and challenges of tourism development in the Addis Ababa-upper rift valley corridor. J. Tour. Hosp. 4:1 -9.

King, B.H. (2006). Conservation and community in the new South Africa: A case study of the MahusheShongwe Game Reserve. Elsevier Ltd., Texas.

Kubsa A, Mariame, A, Amante, G, Lipp, H and Tadesse, T (2003).Wajib: An Alternative Forest Conservation Approach for Ethiopia's Forests. Bishoftu/Debre Zeyt, Ethiopia.

Li, W. (2006) Community participation in nature reserve ecotourism: Experiences from the Jiuzhaigou Biosphere Reserve, China.

Mbaiwa, J.E. (2003). The socio-economic and environmental impacts of tourism development on the Okavango Delta, northwestern Botswana. Journ. Ari. Environ., **54:** 447-467.

Men, P (2006) Tourism, Poverty, and Income Distribution: Chambok Community-based Ecotourism Development, Kirirom National Park, Kompong Speu Province, Cambodia. J. GMS Developm. Stud. 3: 57-68.

Menbere IP, Menbere TP. (2017). Opportunities and challenges for community-based ecotourism development: A case study in Dinsho and Goba Woredas, Southeast Ethiopia. Int J Ecol Ecosolution, 4(1): 5-16.

Odede, F.Z.A., Hayombe, P.O. and Agong, S.G' (2015). Ecotourism for Community Empowerment and Social Inclusion: The Case of Abindu Sacred site in Kisumu County, Kenya. J Econ. Sustain. Develop. 6(14): 7-15.

Ogara, OW, Seneiya, OJ and Ongoro, E B (2013). Community based conservation and ecotourism as an environmental management practice for climate change adaptation in Ewaso Nyiro arid land ecosystem, Samburu County Kenya. J Environ. Sci. Wat Res. 2(4): 106 -111.

Ogato GS, Abdise F, Gammie T, Abebe W. (2014). Promoting rural local development: The case of Wonchi Ecotourism Society, West Shoa Zone, Ethiopia. Prime J Soc Sci, 3: 662-673.

Oromia forest and wildlife enterprise (2013). Partcipants of the Adaba-Dodola community based ecotourism. Report paper, p. 2.

Teressa D K. (2015a). Development of community based ecotourism in Wenchi Crater Lake, Ethiopia: Challenges and prospects. J Hosp Manag Tour, 6: 39-46.

Teressa, D. K. (2015b). Inside the commons of ecotourism development in Ethiopia: Strategic communal empowerment or marginalization? Evidence from Wenchi community based ecotourism. I. J. Biodiv. Conserv. 7(11): 429-434.

Teshome, T. (1999). Effect of grazing and fire on tree regulation in conference mountane forest of Adaba dodola area in Ethiopia MA thesis ,Gottingen Germany p.60.

Thomas, Y. (2013). Ecotourism development in Ghana: A case of selected communities in the Brong-Ahafo Region. J Hosp. Manag. Tour. 4(3), pp. 69-79.

Thomas, Y. (2014). Empowering residents to participate in Ghana's ecotourism projects: A study of some communities in the Brong-Ahafo region. Hera. J Geog. Regio. Plan. 3 (1): 035 - 044.
UNWTO (2001). Compendium of Tourism Statistics; UNWTO, Madrid.
Veit, P. G. and Benson, C. (2004). When Parks and People Collide. Carnegie Council for Ethics in International Affairs, Elsevier Ltd., Texas.
Ven, S. (2015). Host Residents' Attitude toward Community-based Ecotourism: Empirical Study in Southwestern Cambodia. J. Tour. Hosp. 4(1): 1-11.
Wearing, S. and Neil, J. (1999). Ecotourism: Impacts, Potential and Possibilities. Butterworth Heinemann, Oxford and Melbourne.
Wilder, M. (2016). An assessment of ecotourism as an effective tool for sustainable forest management: The case of Adaba-Dodola, Ethiopia, MSc Thesis, University of Washington, DC.